

TRUST FORMATION IN GLOBAL, VIRTUAL PARTNERSHIPS: RUSSIA AND
THE UNITED STATES EXAMINED

by
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TABLE OF CONTENTS

CHAPTER	Page
I. INTRODUCTION	
Literature Review.....	3
Trust formation/Risk Taking.....	3
Time's Impact on Trust/Swift Trust.....	5
<i>Culture's Impact on Trust</i>	6
Intercultural Research based on Geert Hofstede.....	8
Russia and the United States based on Hofstede.....	10
<i>Russian History</i>	11
Intercultural impacts on Trust.....	12
Computer Mediated Communication Research.....	13
<i>Characteristics of CMC</i>	13
<i>CMC and Emotions</i>	17
Culture and CMC.....	20
II. METHODOLOGY AND PROCEDURE	22
Method.....	22
<i>Participants</i>	22
Data Collection and Analysis Procedures.....	23
III. RESULTS	24
Results.....	24
<i>Trust formation and Culture</i>	27
Computer-Mediated Communication.....	28
<i>CMC and Culture Results</i>	30
IV. DISCUSSION	31
Discussion.....	31
Culture and Trust Formation Discussion.....	33
<i>CMC and Trust Discussion</i>	34
<i>Limitations of Study</i>	35
Implications for Future Research.....	35
References.....	37
Appendix A.....	41
Appendix B.....	42
Appendix C.....	48

List of Tables and Figures

Figure 17
Table 126
Table 236

Abstract of Thesis

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Corporate Communication

Trust Formation in Global, Virtual Partnerships: Russia and the United States Examined

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This study looks at trust formation within intercultural, virtual partnerships and how, or if, trust formation is different when all communication takes place via the Internet. Two cross-cultural communication classes were paired together, one at the University of Wisconsin-Whitewater and one at the Institute of Business, Management, and Law in Rostov-na-Donu, Russia. Both qualitative and quantitative research was used to measure the trust formation. Results show that trust is formed differently from face-to-face communication and that both culture and computer-mediated communication played a role in how positive the trust formation was. Connections to previous computer-mediated communication, trust, and intercultural research are suggested, and implications for further research are discussed.

CHAPTER 1

INTRODUCTION

The world population as of September, 2002 was 6,271,660,662 (<http://www.ibiblio.org/lunarbin/worldpop>). Of that population, approximately 605,600,000 people are online, and that number continues to grow (http://www.nua.ie/surveys/how_many_online/). With the number of Internet users increasing daily, the number of business relationships occurring in the virtual realm has also increased. But how do workers that are paired together from different countries build the trust necessary to form a successful partnership online?

This research study examines how trust is formed in online, virtual partnerships. The participants were students enrolled in a cross cultural communication class either at the University of Wisconsin-Whitewater or the Institute of Business, Management and Law in Rostov-na-Donu, Russia. Through out the semester the students were paired together, and worked on several projects. The projects focused on disclosure of their culture, and disclosing what they knew about the others' culture. The variables measured were the intercultural impacts and the computer mediated communication impacts on trust formation. Hofstede's Value Survey Model was used to measure how closely the participant's scored as compared to Hofstede's 1980 results. A Likert-type trust scale was also used at the end of the research study to determine how much trust the participants had with their partners. Qualitative data was also obtained from the projects that were given throughout the study and from open-ended questions on the Overall Trust Survey given out at the end of the study. Each project completed by the partners dealt with the

cultural differences between the United States and Russia. The overall goal for this research project was to determine how trust was formed, if at all, between the partners and what impact cultural issues and Computer-Mediated Communication played in the formation of trust.

Trust Research

Trust is important in all relationships, whether business or personal and it is hard enough to trust someone in a face-to-face relationship, but due to the lack of nonverbal cues in computer-mediated communication, it may become even more difficult. .

What exactly is trust and how has it been defined? The definition of trust that we will be using in this article is: Trust is the perception of the degree to which an exchange with someone will fulfill their expectations in situations of risk or uncertainty (Bailey, Gurak, & Konstan 2001). Trust is based on perceptions of a partner's behavior. If people believe that their partner is predictable and dependable and show faith in the future of the relationship, then trust will form between them (Holmes & Rempel, 1989). "We trust when we are vulnerable to harm from others yet believe these others would not harm us even though they could" (Friedman, Kahn & Howe, 2000, p. 34). Risk taking is a vital piece in this study's definition of trust, and has been widely studied.

Trust formation and Risk Taking

An important element of trust is risk taking. "It is the element of risk-that is, despite a careful assessment of the other person's intentions, capabilities, and motives, one can never be certain of a satisfactory outcome-that gives trust dilemma its basic character " (Johnson-George & Swap, 1982, p. 1306). Each person involved in trust

building has taken some sort of risk, and it is risky to trust someone. When you do finally build the trust, you have become vulnerable. When trust is built via online channels, the nonverbal element of communication is removed, making the initial risk of opening up even more difficult. What is so important with trust is that we have to rely on others, and this involves great risk. Taking this risk allows us to open up and share with them about ourselves to establish this bond between the participants which allows for open and honest communication.

Johnson-George and Swap (1982) developed three *priori* categories for trust. The first of these categories was trusting another with material possessions. This was the category with the least amount of risk involved. If the party that had been trusted to watch the material possession lost it, usually the possession could be replaced. There was no risk to human or animal life. The medium range categories were a belief that the person could be trusted with the other person's material possessions and a belief in the trust of the other person's reliability and dependability. This category comes with ongoing communication and sharing, which in essence allows for the trusting to reach the next level. Johnson-George and Swap (1982) found the highest risk trust situation was trusting another with one's physical safety. To allow someone to save your life or protect your life is allowing you to entrust your right to live to someone else. This involves high levels of disclosure and rapport building, as well as knowledge of how previous interactions were handled, that allow you to feel comfortable giving that right to someone.

In the current study, the second of the *a priori* categories that is the most important, where you trust someone to be responsible and reliable. Throughout the study, the participants worked with each other on several assigned projects. These projects dealt mainly with cultural differences between the United States and Russia. Since these students did receive a grade on the projects, they will most likely judge each other on dependability and reliability based on the timeliness of getting the projects completed. We expect that the participants will primarily judge their partners' trustworthiness based on the participants impression of whether or not the partner was responsible and reliable.

Swift Trust

The models of trust most common in scholarly research state that trust is formed over time. A 1996 study by Myerson, Wick, and Kramer suggests that the traditional trust building processes in online and temporary groups are not practical. The participants do not have a lot of time to develop trust in the traditional way. Swift trust is created when groups must move quickly and will likely never work with each other again. They often proceed as if the trust building process had already occurred and tend to trust everyone until someone breaks that trust.

The concept of swift trust is further explained by Iacono and Wiesband (1997). They explain swift trust as much more cognitive than trust that is built over time. Trust is considered an action instead of an interpersonal "getting to know you" session. They also state that swift trust is often used in an online setting since the non-verbals are taken out of the situation.

The idea of swift trust is important to this research study. Since our study measures trust formed between global partners from different countries who will never work together again, the trust formation that occurs between these teams will most likely be swift trust. The partners will not have the time to form a trusting relationship that is built over an extended period because they will only be working together for a semester, and the nature of their correspondence will be work related, which will not leave much time for small talk.

Also, since communication will take place completely via e-mail, the argument that Iacono and Wiesband (1997) make about how swift trust is formed mostly in online environments where there are no non-verbal interactions fits nicely with this research study. The areas of swift trust discussed above, and the Johnson-George and Swap (1982) study give us a clue as to how our global, virtual partnerships will form trust.

Culture's Impact on Trust when CMC is the Communication Medium

A study done by Jarvenpaa and Leidner in 1999 looked at the area of trust in global virtual teams. These teams used e-mail and message boards to communicate and came from different countries and cultural backgrounds. Jarvenpaa and Leidner (1999) suggest that trust is hard to maintain in virtual homogeneous teams, but when culturally diverse teams are formed, the trust factor becomes even harder to obtain.

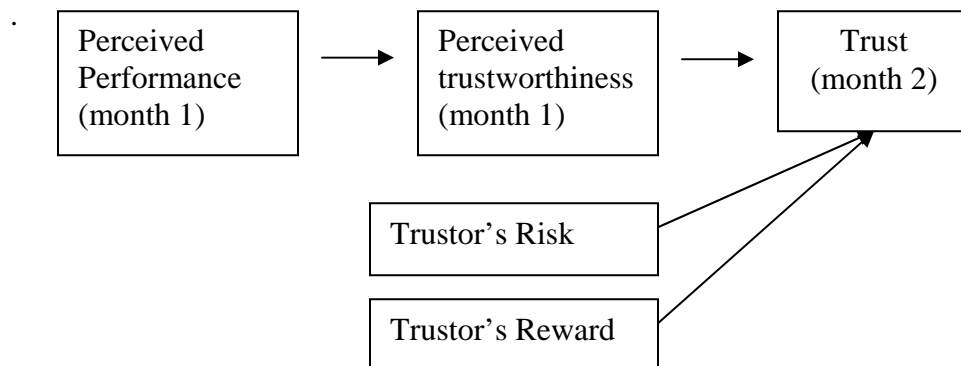
Overall, the results of the Jarvenpaa and Leidner study showed that the culturally diverse teams which reported high levels of trust in the beginning and at the end were more capable of managing the uncertainty, complexity, and expectations of the virtual environment than teams who did not have the trust at the beginning or at the end

(Jarvenpaa & Leidner, 1999). Out of the 29 teams studied, only 9 moved from a low trust condition to a high trust condition. This supports the idea of swift trust since most teams trusted the other team members early on and the level of trust stayed high.

Another study, conducted by Zolin and Hinds in 2002, looked at how trust would be formed in geographically dispersed work teams. They found that trust was based on the individual's perceptions about the partner's perceived performance and perceived trustworthiness as well as the trustor's perceived risk and reward. In the virtual environment, Zolin and Hinds expected to find less trust between geographically distributed teams, but found no evidence of that. They did find however that the trust formed between the participants was more stable.

Model of trust formation according to Zolin and Hinds 2002

Figure 1



Trust is a very complex area of interpersonal communication without any other variables, but when trust formation is needed among members of different cultural backgrounds, it can be even more complex. This study examines how trust is formed among global, virtual partnerships, so it is important to look at intercultural research to

gain insight on how the intercultural nature of the participants may impact trust formation.

Intercultural Research based on Geert Hofstede

In order to understand the impact of intercultural interactions in virtual partnerships, we need to understand how our different cultural upbringings and experiences affect the way in which we communicate with each other and see the world. Based on his research, Geert Hofstede has created four cultural dimensions that define cultural values in different countries in the world.

In his 1980 study, Hofstede looked at 53 countries in order to try to systematically understand the cultural similarities and differences of each. Within his research, four dimensions of culture emerged. The first is the dimension of uncertainty avoidance. This is the culture's ability to tolerate the unpredictable. This dimension indicates to what extent members of a certain culture feel comfortable or uncomfortable in unstructured situations. Cultures with high uncertainty avoidance try to minimize the possibility of unstructured situations by enacting strict laws and rules, safety and security measures, and by a belief in absolute truth. (www.geerthofstede.com).

The second dimension in Hofstede's study (1980) is power distance. Power distance is measured by how the society accepts the unequal distribution of power. Hofstede states that power distance is "a measure of the interpersonal power or influence between boss and subordinate as perceived by the least powerful of the two" (p. 98). In low-power nations, the status difference is lower, so everyone is on a more even playing field. The status of individuals is less significant, so things are negotiated by ideas rather

than status. Power can be equally important in both high power and low power countries, but in high power countries the differences are explicit and in low power countries the differences are implicit.

The third dimension of Hofstede's (1980) research is the individualism/collectivism dichotomy. This is the extent to which the nation values the individual's needs or focuses more on the needs of the group as a whole. Does the culture rely on others to solve problems, or are they solved individually? Is the common trend of that culture to look at how the decision impacts the individual or the family group as a whole? Another characteristic of this dimension is the dependency or the reliance of others. Hofstede explains it best,

On the individualist side we find societies in which the ties between individuals are loose: everyone is expected to look after him/herself and his/her immediate family. On the collectivist side, we find societies in which people from birth onwards are integrated into strong, cohesive in-groups, often extended families (with uncles, aunts and grandparents) which continue protecting them in exchange for unquestioning loyalty (www.geerthofstede.com, September 12, 2003, pg. 3).

The final dimension in Hofstede's research is the masculine/feminine dimension. This dimension is determined by which values or traits, either masculine or feminine, within the culture have more strength. One of the characteristics of this dimension is the traits that the culture finds most common, male or female. "The assertive pole has been called 'masculine' and the modest, caring pole 'feminine.' The women in feminine

countries have the same modest, caring values as the men; in the masculine countries they are somewhat assertive and competitive, but not as much as the men, so that these countries show a gap between men's values and women's values.”

(www.geerthofstede.com, September 12, 2003, pg. 4).

Russia and the United States based on Hofstede

This research study focuses on how trust is formed between Russian and American participants who work in pairs on semester long projects, so it is important to look at Hofstede's (1980) findings on each of these countries comparatively. According to www.cyborlink.com/besite/Russia.htm, Russia scores a 90 on power distance, a 42 on individualism, a 37 on masculinity, and a 70 on uncertainty avoidance. Russia is a high power distance country, a medium individualistic country, and a feminine country with high uncertainty avoidance. More specifically, Russians value status and power, and they place emphasis on high powered/high status people who make the decisions. Also, Russians place equal amounts of weight on individual and group behaviors, and they tend to have more feminine characteristics such as being affectionate, compassionate, and understanding (Hofstede, 1980). Russia also scored high on uncertainty avoidance, which means that Russians do not cope as well with change and new situations as some other cultures.

The United States, on the other hand, scores a 40 on power distance, a 91 on individualism, a 62 on masculinity, and a 46 on uncertainty avoidance (www.cyborlink.com/besite/US.htm). This means that the U.S. is low in power distance, high in individualism, high in masculinity, and low in uncertainty avoidance. The U.S.

tends to focus less on power, and Americans are more equal on the opportunities that each individual has. Americans are a much more individualistic society, and tend to focus on the good of the person rather than the good of the group. Americans also tend to have more masculine traits. Hofstede, 1980, lists the male characteristics as aggressive, ambitious, and competitive. Based on Hofstede's results, the Americans surveyed were much better at change and coping with uncertainty or new experiences than members of other countries.

Russian History

Prior to 1985, many older leaders who were trained by Stalin ruled the Soviet Union. In 1985, Mikhail Gorbachev became president and was trying to keep Communism alive. While Gorbachev was Communist, he did allow the Russian people more freedom. He did start glasnost and perestroika which were supposed to allow the Soviet people to be more open and allow for restructuring. Financial problems caused armies to be removed from Eastern European countries and the Soviet Republics. Once this occurred, the Republics began to demand the right to be autonomous and the Soviet regime collapsed. Since 1991, there have been many changes in Russia. The new leadership is trying to make Russia a westernized country, which has been a very slow process, but with a growing economy and political reforms, they are on the right track (Rychkova, 1994).

Since Russia and the USA fall opposite on nearly every dimension from Hofstede's 1980 research, how will this influence the intercultural interactions between members of the two societies? Based on the changes in Russian history in the last 15

years, we think that Russia and the United States will have closer scores than the 1980 research.

H1a: The American and Russian participants in this research will have more similar scores, Russians scoring more like Americans, than Hofstede's 1980 study.

H1b: The scores between the participants of this study and Hofstede's 1980 study will still be different enough to create a negative impact on trust formation.

The reason that we think that the scores will be closer between the two countries than the 1980 study is that in 1980 Russia was a communist country that was dominated by a strict regime. Today, they are a democratic nation that more closely resembles the United States than the communist USSR of the past.

Intercultural impacts on Trust

How does culture impact trust? Daily and Steiner (1997) studied the influence of group decision support systems (GDSS) on multicultural and homogeneous decision-making groups. Their findings suggest that when groups used the GDSS environment, the participation among all group members was significantly more than in traditional face-to-face communication. In their study, the multicultural groups considerably out performed the homogeneous groups on how many ideas were generated. This study shows that culturally diverse groups participated better and more freely than the face-to-face groups and that trust formation was easier to obtain in the culturally diverse groups.

In the Jarvenpaa and Leidner article (1999), there were no significant cultural impacts found as a result of how trust is formed in a virtual environment. The authors

attributed this to the fact that the participants were all of similar age, background, and education level. They also found that the computer-mediated aspect of the groups' interaction kept the cultural differences insignificant because of the lack of seeing the team members face-to face.

Culture plays a large part in our interacting with others. Hofstede studied many different countries around the world and showed us just how different each country is based on his cultural dimensions. Also, the articles by Daily and Steiner (1997) and Jarvenpaa and Leidner (1999) show that culture did either downplay cultural differences or the participants from the different cultures were able to outperform the homogeneous group. This information was very interesting and helped us gain insight on how our participants may react to the cultural differences of their partners.

Computer Mediated Communication Research

Computer mediated communication (CMC) is best defined by Walther (1992) who states that, CMC is “synchronous or asynchronous electronic mail and computer conferencing, by which senders encode, in text messages that are relayed from senders' computers to receivers” (p. 52). A second definition by Wildermuth (2000) states, computer-mediated refers to “an interpersonal relationship that is formed and maintained primarily through computer-mediated interaction” (p. 237).

Characteristics of CMC

The first characteristic is that CMC lacks non-verbal cues. In face-to-face communication, we rely on non verbal messages to get our message across. In CMC, those nonverbals are removed so that we have to rely only on what is written. This point

is best expressed by Rice and Love (1987). They described CMC as “less friendly, emotional, or personal and more serious, businesslike, and task oriented” (p. 88). Rice and Love found that CMC is definitely not as appropriate for getting to know someone as face to face communication is.

Walther (1996) has a differing opinion. He found that users of CMC go beyond interpersonal communication. He calls this phenomenon hyperpersonal communication. His definition of hyperpersonal communication is a form of communication that is “more socially desirable than we tend to experience in parallel FtF [face to face] interaction” (p. 17). Walther’s research suggests there are four items that make CMC hyperpersonal. First, receivers of messages tend to magnify their perceptions of the person who sent the message. Second, the senders feel as though they have extensive control over their self-presentation because the message can be thought about and changed before it is sent. Third, CMC creates asynchronous channels where the senders can communicate when they want to. Forth, the feedback received provides what Walther describes as a behavioral confirmation loop.

From the above research, we can see that even when messages lack non-verbal components, that people try to make up for it using hyperpersonal communication. Even with hyperpersonal communication though, CMC is different from FtF communication, and these differences may impact trust formation.

The second characteristic of CMC is that it is generally asynchronous, so people who participate in CMC can really think about what they are saying prior to sending the message. This allows users of CMC to revise, edit, or delete a message before it is sent

out and makes the environment less spontaneous and more planned, giving the sender more control over how messages are received. Also, due to the asynchronous nature of CMC, there are no nonverbal cues from other members of the group, which can cause messages to be misunderstood. Tidwell and Walther studied the asynchronous nature of CMC in 2002. They state that, “CMC partners forgo the peripheral questions and answers that mark the normal, superficial exchanges among new acquaintances in FtF encounters. Instead, CMC interactants appeared to employ a greater proportion of more direct, interactive uncertainty reduction strategies—intermediate questioning and disclosing with their partners—than did their FtF counterparts” (Tidwell & Walther, 2002, p. 339). This topic was also studied by Taylor and MacDonald who state, “The absence of social cues in CMC has been hypothesized to affect interpersonal perception and result in the treatment of others in a depersonalized manner” (Tidwell & Walther, 2002, p. 262). When humans communicate face-to-face, sometimes they do not think before they say something, which can often get them into trouble. With CMC, however, we can take our time and really think about what we say and how we say it. This difference is another vital separation between CMC and FtF communication which may impact trust formation.

A third characteristic of CMC is that it can be anonymous. Wildermuth discussed the area of self-disclosure as it relates to CMC in her 2000 article. She found that because e-mail users are unable to see the sender they feel as though they are anonymous, so individuals can be whomever they want and can say whatever they want without worrying about real life ramifications. She also talked about a concept called “concealed

appearance” (p. 244). Because no one knows your age, race, gender or whether you’re attractive or not, people are more concerned about the words in the messages that are sent.

Since CMC can be anonymous and people feel that they can say whatever they want, and be whoever they want, people may not trust who they are talking to. This difference between CMC and FtF communication may hinder how trust is formed because the partners may not believe what they are being told by the other person. The receiver of the message will then decide if the person is trustworthy based on past interactions and how much risk they are willing to take (Johnson-George & Swap, 1982).

From the research outlined above, we learn that CMC is different from face-to-face communication on three key levels: it lacks non-verbal components; it is generally asynchronous; and it is anonymous. It is these crucial differences between CMC and face-to-face communication that may impact how trust is formed.

CMC vs. FtF Relationships

A 1996 study by Jettmar and Rapp discussed the differences found between face-to-face and computer-mediated relationships. The study looked to answer if lower levels of relational satisfaction, interpersonal attraction, and intimacy would be found in computer-mediated relationships when compared to face-to-face relationships. The researchers predicted because CMC has limited the use of nonverbal behavior, and since the physical elements of the relationship are not available, CMC relationships would not be as satisfying or intimate as face-to-face relationships. Results of their study show that there were significant differences between face-to-face and computer-mediated

communication when looking at relational satisfaction, interpersonal attraction, intimacy, and inclusion of the other person in the relationship. A very high significance level found less inclusion is felt in CMC relationships. Jettmar and Rapp (1996) concluded this was due to the missing nonverbal cues and the lack of touch in CMC relationships. The results also showed that people will feel more attracted to partners with whom they interact in a real-world setting, and the data shows people in CMC relationships had a harder time deciding whether or not they were attracted to their partners. Overall, the data found that face-to-face relationships created more intimate, satisfying, and personal relationships when compared to the computer-mediated relationships.

The findings discussed earlier in the Johnson-George and Swap (1982) article revealed how people trust others on different category levels and that these category levels determine what depth we will trust someone. In the Jettmar and Rapp (1996) article, we learned that CMC relationships were less likely to be as intimate, satisfying, and personal as FtF relationships. From these two articles, we learn that disclosure is an important part of trusting someone and to what level the participants in the CMC interaction feel they were able to trust someone will be determined partially by how many the partners were able to disclose information.

CMC and Emotions

Another important piece to trust formation within CMC communication is emotion. In the studies discussed earlier by Rice and Love (1997) and Taylor and McDonald (2002) it was discovered that CMC communication lacks the necessary emotion and nonverbal cues to really build trusting relationships. Since e-mail is mainly

text based, users of this communication medium have created their own way of bringing emotion into CMC. A study done by Rice and Love (1987) looked at emotions in e-mail messages and focused on socioemotional contexts in e-mail messages. They state:

Unlike face-to-face communication, where relations among individuals are influenced by socioeconomic status differences, norm, physical appearance, and speech behavior, individuals using CMC are not required to use indirect paths of interpersonal connections to communicate with other, perhaps socially distant users: They can simply send a message to any person or set of persons on the system (p. 91).

The results of their study showed CMC allowed users to become more socioemotional than regular face-to-face communication. Nearly 30% of the sentences in their study were socioemotional when looked at in a professionally oriented CMC system (Rice & Love, 1987).

A second study done by Walther and D'Addario in 2001, focused on the impact emoticons have on message interpretation. To make up for the lack of social cues in e-mail, users have created what are called emoticons to express emotions in their messages. Emoticons are defined as keystrokes found on an average keyboard used to represent feelings or emotions (Walther & D'Addario, 2001). Walther and D'Addario found when mixed with text, emoticons helped receivers perceive the senders' emotions such as happiness, sadness, and sarcasm in e-mail messages. They found 99% of participants have seen emoticons of some form in e-mail they received. The impact of the emoticons was related to the type of message. Emoticons related directly to the text of the e-mail

were found to greatly enhance the particular emotion being expressed. For example, an e-mail which was about a happy subject followed by the happy emoticon [e.g. :)] was found to enhance the feeling of happiness in the message. The same was true for sad messages, which used the sad emoticon, and a sarcastic message followed by the winking emoticon. This is important to this research since all communication will be via e-mail between the participants. We expect some use of emoticons to make up for the lack of nonverbal cues.

A third study which looked at emotions was done by Witzmer and Katzman in 1997. This research looked at emoticon use as it relates to gender. Witzmer and Katzman (1997) had two main findings. The first was females use emoticons in e-mail messages significantly more than males. While not everyone uses emoticons in e-mail messages, females were found to use it more than males. The second finding in the research done by Witzmer and Katzman in 1997 showed women in their study used more challenging statements in e-mail messages. The researchers stated this goes against previous research done in this area. They felt women were more emotional when sending e-mails, so they tended to flame more in the messages.

CMC can lead to messages that are misinterpreted and misunderstood due to the lack of nonverbal messages sent through this medium (Rice and Love, 1997), so it is logical to assume that a person's interaction via CMC, even with the use of emoticons, will impact whether or not the person will experience a positive (timely responses with no computer related errors) or negative (late responses and computer related errors) level of trust with their partner.

H2a: Positive interaction via CMC by the participants will lead to higher trust between the partners.

H2b: Negative interaction via CMC by the participants will lead to lower trust between the partners.

Culture and CMC

We have seen the many ways that CMC alone has affected individual communication and communication within organizations, but when culture is brought into the mix, things get even more interesting. Wildermuth (2000) stated, “Because there are no visual, nonverbal, or social cues, cultural aspects such as dress, skin color, and culturally-specific non-verbals are not readily available” (p. 239). Ess (2002) also talks about the impact that CMC has had on cultural issues,

“More broadly, computer networks have made interaction between peoples of different cultures possible on a scale (at the time of this writing, somewhere between 5 and 7 percent of the world’s population), scope, and speed never before available. CMC technologies provide us with remarkable new possibilities for engagement between cultures and peoples” (p. 230).

Much of the research found in the area of CMC and cultural issues was focused on group communication. While this research will focus on partnerships, the characteristics and challenges demonstrated within the virtual teams may also be present within the intercultural virtual partnerships. One of these challenges was cited by Zolin and Hinds (2002) from Keisler and Cummings (2002) who say that when working on

teams that are spread all over the world that the team spends less time in the presence of others and will have to rely more heavily on technology to communicate such as fax, email, the Internet, and chat rooms. Because members of global teams generally spend less time face to face, they are less likely to develop rapport and trust.

An article done by Barker et. al in 2000 gives researchers new contexts to study in the area of CMC communication. Barker et. al proposed that minority groups will experience loneliness, decreased group satisfaction, and reduced productivity when working with members of a different culture. They also applied their article to Hofstede's 1980 study and the core dimensions discussed earlier in this paper. They found that groups that are composed of members who vary on power distance and uncertainty avoidance and engage in collective agreement in establishing leadership will be less likely to experience conflict than groups who do not engage in collective agreement. They further found that when a group has members from both collectivist and individualistic cultures, the collectivist members will send more positive relational messages.

Another study that looks at CMC as related to cultural dynamics on group settings was done by Daily and Steiner in 1998. They looked at group decision support systems (GDSS) and the effects that such support systems had on group decision making. The results of their study suggest that a GDSS environment improved group decision making. This was found to be true of both homogeneous and multicultural groups when compared with groups not using GDSS. In fact, Daily and Steiner (1998) found that the multicultural groups significantly outperformed the homogeneous groups when it came to

the number of ideas generated and produced an even larger number of ideas when compared to both homogeneous and multicultural groups using non-GDSS methods.

The articles above show that some of the globally diverse CMC groups were more successful than FtF groups in certain key areas (Daily & Steiner, 1998) and that trust formation would be less due to the lack of nonverbal communication (Keisler & Cummings, 2002). Since there has been only one significant article specifically related to CMC, culture, and trust (Keisler & Cummings, 2002), this study seeks to answer the following research question:

RQ1: How do CMC and culture combine to impact the trust building of the intercultural, virtual partners?

CHAPTER 2

METHOD

Participants

The participants for this study were thirty-eight college-aged participants with an average age of 22. The participants were enrolled in cross-cultural communication classes at different universities. Twenty six of the participants were enrolled in Dr. Wildermuth's class at UW-Whitewater and twelve were enrolled in Dr. Rozina's class at the Institute of Management, Business, and Law in Rostov-na-Donu, Russia. Twenty six of the participants were American and twelve of the participants were Russian. There were fifteen American female and eleven American male participants. Demographic information was available for only four of the Russian participants; three were male and one was female. Participants were chosen because they were students enrolled in one of

two cross cultural communication classes discussed above. Since they were also receiving a grade for taking the class, a consent form was filled out. Also, the anonymity of the students stayed intact because each of the students were coded with a number 1A for the first American and 1R for the first Russian. Participation in the research study was completely voluntary and did not impact the participant's grade in the course.

Data Collection and Analysis Procedures

Each participant in this research study filled out Hofstede's Value Survey Model of 1994 (see Appendix B). The researchers had purchased a license for this research from Tilburg University. This data was used to measure where the two groups fell based on Hofstede's cultural dimensions. Another scale, which measured the amount of interpersonal trust, was given at the end of the data collection. This scale, called the Overall Trust Survey (see Appendix C), was a Likert scale that asked questions about how trustworthy the participants felt their partners were. There were some qualitative open-ended questions as well that had the participants elaborate on trust, CMC, and culture.

Throughout the class, data was collected in the form of e-mail communication between the participants as well as the assignments that the partners were asked to complete throughout the semester. This data was used to see how (if at all) trust was formed between the participants.

Each week or two the participants were assigned a journal (six total) that were based on cultural issues and teaching their partners about their culture. The final journal,

number six, was a reflection journal that had the participants reflect on this study and what they feel they learned from it. They had to rely on their partners to do each journal.

The researchers examined all written assignments and any e-mail correspondence that was provided to them by the participants. The only expectation that the participants had was to complete the journal articles and turn them in. Any e-mail correspondence received was strictly voluntary, and two pairs provided e-mail messages for us. Each journal was then examined for any comments made about trust formation, CMC, and culture. Comments made about trust were highlighted in yellow, comments made about CMC were highlighted in blue, and comments made about culture were highlighted in orange. Once the thematic analysis was done, the researchers then looked for overall themes from the comments. These comments helped to determine the overall feeling about the effectiveness of CMC, how much trust participants had in their partners, and what comments had been made in connection with culture. Each of the comments highlighted were then cut up and put in a pile with other comments dealing with that same theme. There were 154 comments about culture, 135 made about CMC, and 98 made about trust from the entire journal articles that were turned in.

CHAPTER 3

RESULTS

To find a result for the first part of Hypothesis 1, each American participant involved in the research project, a total of twenty-six, filled out the Value Survey Model (VSM) and four of the twelve Russian participants completed the VSM. Once the survey

was completed the results were tabulated (see Appendix A) to see how similar to the Hofstede (1980) results the participants were.

H1a: The American and Russian participants in this research will have more similar scores, Russians scoring more like Americans, than Hofstede's 1980 study.

H1b: The scores between the participants of this study and Hofstede's 1980 study will be different enough to create a negative impact on trust formation.

As discussed earlier, Hofstede (1980) ranked 53 countries on 4 different dimensions. On the category of Power Distance (PDI), the extent to which the lower ranking members of an organization accept and expect power to be distributed unequally, Hofstede (1980) ranked Americans as a 40 and participants of this research study scored a 9.8. This is important because the score of the Hofstede 1980 study was much higher than the score of the participants for this research. For Uncertainty Avoidance (UAI), the extent to which members of a society or organization feel uncomfortable or threatened by change or unknown situations, Hofstede (1980) ranked American's as a 46 and our participants scored a 49. These scores are the closest that we found between Hofstede's 1980 study and this research study. The results of this study in the area of Individualism (IDV), the extent to which the society has to rely on themselves instead of other people, showed a score of 88.55. Hofstede's results found Americans to be a 91, highly individualistic. The final area of Masculinity (MAS), a society in which the dominant gender roles are distinctively masculine in nature, showed differing results between Hofstede's (1980) study and ours. The United States scored a 62, a very masculine score

on Hofstede's survey, and a 4, very feminine on our survey. This is the most significant difference between the two studies.

Hofstede also measured Russia, in 1980 the USSR, on the same 4 dimensions. For the PDI dimension, he found Russia to be a 90, or very high power distance. We found that the Russian participants were a 9.35, very low power distance. This was the most significant difference we found in the Russian studies. The second dimension, UAI, Hofstede (1980), found that Russian participants scored a 70. Our research shows a score of 49. Both of these scores are "middle of the road" in uncertainty avoidance. Russia scored a 42 on IDV in Hofstede's original survey, and a score of 90.25 in our survey, so the Russian participants in our survey are more individualistic than Russians used to be. In the final area of MAS, Russia scored a 37, or low masculinity in Hofstede's research and a 19.6 in our research. These results put Russia closer to the femininity side of the scale today than in 1980. The results of this area of research are summarized below in Table 1.

Table 1

Comparison of Hofstede's (1980) findings with the findings of this research

	Americans Hofstede	Americans	Russians Hofstede	Russians
Power Distance	40	9.8	90	9.35
Uncertainty Avoidance	46	49	70	41.7
Individualism	91	88.55	42	90.25
Masculine	62	4	37	19.6

The results of the first part of hypothesis 1a and 1b are supported by this research. American's and Russians have scores that are closer than the original research done by Hofstede, and the results are also closer to the original American results.

Trust formation and Culture

To test the second part of hypothesis 1, the researchers analyzed the qualitative comments made by the participants through both email and the feedback within the specific assignments and used the Overall Trust Survey to evaluate if trust was formed.

The results of the Overall Trust Survey showed that trust was formed between all of our participants. This means that the second part of hypothesis 1 was not supported by the data collected. The overall mean score was 4.17 out of 5 for Americans, and 4.22 out of 5 for Russians. The comments made by the participants were also positive. Of the American participants that completed the Overall Trust Survey (7 Americans); all said that culture played no impact in whether or not they trusted their partners. The Russian participants who filled out the survey (3 in total) also said that culture did not have an impact on their trust formation.

Some of the assignments show different results, however. The first assignment that the participants had to work together on was a sheet that asked them to fill in the blanks regarding what the first things were that came to mind when they thought about Americans. Then the same question was asked about Russians. They then had to think of the first things that came to mind when they thought about the USA as a country and then Russia as a country. Each participant was then asked to come up with ten facts about the opposite country (Russia if American, and America if Russian) as well as ten prominent

people from the opposite country. Finally, they were asked to talk about where they get their information about their partner's culture. The results and comments in this exercise were interesting. All of the Russians could come up with ten facts about America, but only two of the Americans could come up with ten facts about Russia. There was a similar result when they were asked about prominent people. In fact, one American respondent could come up with only one fact about Russia and that was that the capital is Moscow. Some American participants commented about some of the first things that came to mind when the Russians were answering about Americans. One participant stated, "I guess I never realized how obvious our self-centeredness as a culture is evident to other outside cultures." Another stated, "Their negative impressions of Americans reveal that they think we are all a bunch of cheater and liars and don't care about anyone but ourselves." This shows that some of the Russian participants had a negative view of the Americans. One participant said "I am still not sure what to expect when I email Dima." These comments show that trust wasn't so easily formed at the beginning, but the Overall Trust Survey shows that it did eventually form.

Computer-Mediated Communication

In order to determine how much, if any, impact CMC had on trust formation, the participants were asked open-ended questions on the Overall Trust Survey. The first question we asked related to this was how working with their partner exclusively over the Internet affected their relationship or trust building. All but one of the American respondents said that communicating over the Internet did not impact trust at all. Participants made comments such as, "It was easier to trust the person because we had

limited contact and everything really had to be divulged in certain emails.” Another said, “She was awesome! Once she even got back to me overnight when I got a late start on an assignment. If it had been awhile, she always apologized and explained why.” When we compare these responses to the mean scores of the Overall Trust Survey, we see the correlation to hypothesis 2a and 2b.

H2a: Positive interaction via CMC by the participants will lead to higher trust between the partners.

H2b: Negative interaction via CMC by the participants will lead to lower trust between the partners.

The participants that had positive comments about CMC also had positive trust formation. Some of the comments made by the participants who had the highest overall trust scores had comments relating to talking about things other than just class stuff. For example, one American participant who scored his partner a perfect 5 score on the Overall Trust Survey made the comment, “We sent pictures of each other, and we talked about things besides our homework.” The Russian participant who scored her American interaction a 4.6 stated, “Before our interacting we didn’t even know each other. The using of the Internet helps us to become closer to each other in a very short period of time. We are able to discuss something that interested for us in that very moment.”

On the other hand, participants who had negative experiences with CMC also had low trust scores. One participant, who had a score of 4.0, a score lower than the mean of 4.17, stated “I couldn’t build a fully trustful relationship with my partner, I’m not a huge fan of e-mail.” In this example, we can see the direct correlation between negative CMC

interaction and low trust building. Another participant stated, “The first day I was assigned my partner, I decided to send her an email introducing myself. Everyday after I first wrote her I checked my email account always anticipating a reply. She never replied and I ended up doing the first journal assignment by myself. At this point, not all of my hopes of having a rewarding Russian partnership had diminished, but they were sure on their way.” There was a definite impact between CMC experiences and trust formation, so hypotheses 2a and 2b were supported.

CMC and Culture

The last area examined in this study is how CMC and culture combine to interact with trust.

RQ1: How do CMC and culture combine to impact the trust building of the intercultural, virtual partners?

We can see from the above two hypotheses that both cultural differences and CMC impacted whether or not the participants had high levels of trust. We learned from earlier studies by Walther (2002) and Rice and Love (1987) that the lack of nonverbal messages in CMC can impact how people communicate in the online environment. Our participants felt that CMC was directly related to how successful trust formation was. One participant stated, “I do not know if my partner was not real computer savvy or just did not have access to a computer a lot but she did not leave a good impression with me about herself, Russian students, or intercultural communication.” Another participant stated, “I would want more accountability from partners, some other mode of communication, more time between assignments...so there could be more casual

communication between partners.” She goes on to say that, “Our initial e-mails were interesting because my partner and I kept confusing each other with our vocabulary.”

This participant brings up an interesting point. Our Russian participants spoke English as a second language, so not only did our participants have to work online with no nonverbal messages to work with; their experiences were even more complicated by the fact that the person they were communicating with did not speak fluent English. Both CMC and culture combined to make an impact on how trust was formed among our partnerships.

CHAPTER 4

DISCUSSION

This study was interested in finding out how trust is formed between global, virtual partnerships when there was interaction exclusively via email. The Value Survey Model of 1994 was used to measure how similar or different our participants were when compared to Geert Hofstede’s 1980 survey of cultural dimensions. Another scale called the Overall Trust Survey was used to measure how much the partners trusted each other after working together for over two months. Qualitative data was also collected to obtain more in depth responses to how CMC and culture impacted trust formation.

The results found from this research study are very interesting. The results of the first hypothesis found that the scores of our Russian and American participants were closer to each other in the current study than in the 1980 Hofstede research and that the results leaned more toward the American results in the initial 1980 Hofstede study. As stated above, this could be due to the fact that Russia was not a free society, so some of

the more extreme scores from 1980 could be a result of Russians' being a very high power distance and a high uncertainty avoidance nation and could be the result of the communist regime that the people there were living under at the time. Both of those areas almost completely changed sides with the participants we surveyed. The Russian participants went from a 90 power distance score and a 70 uncertainty avoidance score to a score of 9.35 for power distance and a 41.2 for uncertainty avoidance. These scores show a large change from the original scores.

Another impact on the scores for our survey is the fact that there have been significant changes in the Russian educational system in the last fifteen years. According to an article written by Mechitov and Moshkovich in 2004, the Russian educational system has been traditionally more specialized than their Western counterparts, and focused on a specific area of study such as electronics or the steel industry. After 1992, the entire Russian school system changed to be more generalized like the schools in the West. New schools were created in small cities and the government no longer helped pay for the Russian students' education. This dramatically changed how Russians thought about school in a time where everything else in their world was changing. This could explain why the uncertainty avoidance score saw an almost 30 point drop.

The American participants' results also changed from the 1980 results. The power distance score in 1980 was a 40 and in our current study was a 9.8. For the area of masculinity, Americans in 1980 were a 62 and in our study were a 4. This represents a difference that was also significant. There are not any specific reasons for why these scores changed so dramatically except for the fact that there is a 24 year gap between the

two studies, and can examine important historical events such as September 11, 2001, the globalization of the Internet, as shown by these statistics; the world population as of September, 2002 was 6,271,660,662 (<http://www.ibiblio.org/lunarbin/worldpop>). Of that population, approximately 605,600,000 of those people were currently online, and that number continues to grow (http://www.nua.ie/surveys/how_many_online/), and now women have more jobs with increasing educational levels (Institute of Medicine, 2000).

Culture and Trust Formation

Another interesting finding from this research was the fact that the participants felt that culture played no part in whether trust was formed based on the Overall Trust Survey; however, in the qualitative responses of the participants, culture was shown to have an impact. Some of the participants felt frustrated that their Russian partner never got back to them via email or that they did not get responses as quickly as they would have liked. “The Russian experience has made me feel uncomfortable relying on individuals from another culture or countries to get the things done that are needed. Even when I gave my partner a deadline my requests were not met. If I did ever get a response it was either not in time or it did not answer the questions I needed answered.” Another student stated that, “it was very frustrating when my partner wouldn’t respond for days or weeks on end.” These responses, and the many others found within the qualitative research, show that while the students felt that culture, as shown by the high scores on the Overall Trust Survey, had no impact on trust, culture and CMC do combine to have an impact. The specific comments made above, are clear indicators that the cultural value of time, either monochronic or polychronic, did have an impact on this research.

The possible reason for this could be that the participants may not have wanted to admit that they trusted someone of a different culture differently than they would someone of their own culture. The participants could have also felt that it wasn't the culture that made the difference, but the CMC part of the interaction. The trust in our groups seemed to be built over time since many of the initial interactions between the partners were not positive experiences. The findings in this part of the research differ from what Jarvenpaa and Leidner (1999) suggested about trust being harder to build over time because many of the participants in this study went from making negative comments about their initial interactions to then scoring their partners high on how trustworthy they were on the Overall Trust Survey.

CMC and Trust

From this research results found that CMC had an impact on how trust was formed. Someone who had highly successful CMC interactions was more likely to rate the trust higher than someone who did not have a successful CMC interaction. One of the questions asked on the Overall Trust Survey was "How do you think interacting via the Internet differed from any face-to-face partnerships you may have been in?" One participant said, "There is a large sense of anonymity." Another participant stated that anonymity impacted his interactions when he stated "I actually probably opened up more because I couldn't see him face to face." These comments show that CMC had a positive impact on trust. These comments are consistent with other research studies done by Walther in 1992 and Rice and Love in 1987 who talk about the lack of nonverbal messages in CMC which can impact whether or not we trust someone. Johnson-George

and Swap (1982) state that it is up to the person receiving the message to determine how much risk in the person they are willing to take due to the group's or partners' past interactions, and that risk is one of the main factors in whether or not we trust someone.

Limitations

There was not as much Russian participation as originally hoped. In the early stages of planning, we had hoped to have approximately 30 American participants and 30 Russian participants contributing to this research. Once the project got going, however, we had only 12 Russian participants who were actively communicating with the American students. This caused frustration for the American participants and led to some of the Russian students doing double or even triples duty by having more than one American partner. We never got a clear answer as to why we had such a poor Russian participation rate.

Another limitation to this research is that we had such a small sample size. We had only 4 Russian participants fill out the Value Survey Model, so that made it hard to accurately measure how much larger population of Americans and Russians moved on the Hofstede dimensions scale. We were able to determine only our small sample.

Implications for Future Research

There are many directions for future research. Two will be discussed here. The first would be to break down this study further into four groups. A breakdown of these groups is in the Table 2 below.

Table 2

	CMC	Face to Face
Cross Cultural Participants	CMC and cross cultural	Face to face and cross cultural
Same Culture Participants	CMC and same Culture	Face to Face and same culture

This would allow comparisons of the four groups that would be able to further detect which area, either CMC or culture, had the most impact on trust formation and whether the results were positive or negative.

Another area for further research would be to expand on the results found from the VSM scores of our participants. Our results were different from the 1980 research conducted by Hofstede, and it would be interesting to conduct this survey on a larger scale to see if Russia and the United States have really moved that much from the original research. This would allow other researchers the opportunity to analyze what changes have occurred to make the results move that much. With the globalization of our world, this will be an important topic for the future. As one student said, “[no matter where you are from,] all of us have the same purpose in life which is to survive and make it, but we all try to accomplish this goal by doing different things...it is neat how different we do things.”

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Appendix A

Value Survey Model-Calculation Breakdown

- 1. Find the mean score for each question**
- 2. Calculate each of the dimensions with the below formulas.**

Power Distance Index (PDI)

The index formula is

$$\text{PDI} = -35m(03) + 35m(06) + 25m(14) - 20m(17) - 20$$

in which m(03) is the mean score for question 03, etc.

The index normally has a value between 0 (small Power Distance) and 100 (large Power Distance), but values below 0 and above 100 are technically possible.

Individualism Index (IDV)

The index formula is

$$\text{IDV} = -50m(01) + 30m(02) + 20m(04) - 25m(08) + 130$$

in which m(01) is the mean score for question 01, etc.

The index normally has a value between 0 (strongly collectivist) and 100 (strongly individualist), but values below 0 and above 100 are technically possible.

Masculinity Index (MAS)

The index formula is

$$\text{MAS} = +60m(05) - 20m(07) + 20m(15) - 70m(20) + 100$$

in which m(05) is the mean score for question 05, etc.

The index normally has a value between 0 (strongly feminine) and 100 (strongly masculine), but values below 0 and above 100 are technically possible.

Uncertainty Avoidance Index (UAI)

The index formula is

$$\text{UAI} = +25m(13) + 20m(16) - 50m(18) - 15m(19) + 120$$

in which m(13) is the mean score for question 13, etc.

The index normally has a value between 0 (weak Uncertainty Avoidance) and 100 (strong Uncertainty Avoidance), but values below 0 and above 100 are technically possible.

Appendix B

V S M 9 4

VALUES SURVEY MODULE 1994

QUESTIONNAIRE

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INTERNATIONAL QUESTIONNAIRE (VSM 94) - page 1 of 4

Please think of an ideal job, disregarding your present job, if you have one. In choosing an ideal job, how important would it be to you to ... (please circle one answer in each line across)

- 1 = of utmost importance
- 2 = very important
- 3 = of moderate importance
- 4 = of little importance
- 5 = of very little or no importance

- | | | | | | |
|---|---|---|---|---|---|
| 1. have sufficient time for your personal or family life | 1 | 2 | 3 | 4 | 5 |
| 2. have good physical working conditions (good ventilation and lighting, adequate work space, etc.) | 1 | 2 | 3 | 4 | 5 |
| 3. have a good working relationship with your direct superior | 1 | 2 | 3 | 4 | 5 |
| 4. have security of employment | 1 | 2 | 3 | 4 | 5 |
| 5. work with people who cooperate well with one another | 1 | 2 | 3 | 4 | 5 |
| 6. be consulted by your direct superior in his/her decision-making | 1 | 2 | 3 | 4 | 5 |
| 7. have an opportunity for advancement to higher-level jobs | 1 | 2 | 3 | 4 | 5 |
| 8. have an element of variety and adventure in the job | 1 | 2 | 3 | 4 | 5 |

INTERNATIONAL QUESTIONNAIRE (VSM 94) - page 2 of 4

In your private life, how important is each of the following to you? (please circle one answer in each line across)

- | | | | | | |
|---|---|---|---|---|---|
| 9. Personal stability | 1 | 2 | 3 | 4 | 5 |
| 10. Thrift | 1 | 2 | 3 | 4 | 5 |
| 11. Persistence (perseverance) | 1 | 2 | 3 | 4 | 5 |
| 12. Respect for tradition | 1 | 2 | 3 | 4 | 5 |
| 13. How often do you fee nervous or tense at work? | | | | | |
| 1. never | | | | | |
| 2. seldom | | | | | |
| 3. sometimes | | | | | |
| 4. usually | | | | | |
| 5. always | | | | | |
| 14. How frequently, in your experience, are subordinates afraid to express disagreement with their superiors? | | | | | |
| 1. very seldom | | | | | |
| 2. seldom | | | | | |
| 3. sometimes | | | | | |
| 4. frequently | | | | | |
| 5. very frequently | | | | | |

INTERNATIONAL QUESTIONNAIRE (VSM 94) - page 3 of 4

To what extent do you agree or disagree with each of the following statements? (please circle one answer in each line across)

- 1 = strongly agree
 2 = agree
 3 = undecided
 4 = disagree
 5 = strongly disagree

- | | | | | | |
|--|---|---|---|---|---|
| 15. Most people can be trusted | 1 | 2 | 3 | 4 | 5 |
| 16. One can be a good manager without having precise answers to most questions that subordinates may raise about their work | 1 | 2 | 3 | 4 | 5 |
| 17. An organization structure in which certain subordinates have two bosses should be avoided at all costs | 1 | 2 | 3 | 4 | 5 |
| 18. Competition between employees usually does more harm than good | 1 | 2 | 3 | 4 | 5 |
| 19. A company's or organizations rules should not be broken - not even when the employee thinks it is in the company's best interest | 1 | 2 | 3 | 4 | 5 |
| 20. When people have failed in life it is often their own fault | 1 | 2 | 3 | 4 | 5 |

INTERNATIONAL QUESTIONNAIRE (VSM 94) - page 4 of 4

Some information about yourself (for statistical purposes):

21. Are you

1. male
2. female

22. How old are you?

1. Under 20
2. 20-24
3. 25-29
4. 30-34
5. 35-39
6. 40-49
7. 50-59
8. 60 or over

23. How many years of formal school education (or its equivalent) did you complete (including primary school)?

1. 10 years or less
2. 11 years
3. 12 years
4. 13 years
5. 14 years
6. 15 years
7. 16 years
8. 17 years
9. 18 years or over

24. If you have or have had a paid job, what kind of job is it / was it?

1. No paid job (includes full-time students)
2. Unskilled or semi-skilled manual worker
3. Generally trained office worker or secretary
4. Vocationally trained craftsperson, technician, informatician, nurse, artist or equivalent
5. Academically trained professional or equivalent (but not a manager of people)
6. Manager of one or more subordinates (non-managers)
7. Manager of one or more managers

25. What is your nationality?

26. What was your nationality at birth (if different)?

Appendix C

Overall Trust Survey

Please answer these questions as honestly as possible.

1. If _____ couldn't get together with me as we had planned, I would believe his/her excuse that something important had come up.

Low					High
1	2	3	4	5	

2. If _____ promised to do me a favor, he/she would follow through.

Low					High
1	2	3	4	5	

3. When _____ told me something about them or their country, I felt that they were being honest with me.

Low					High
1	2	3	4	5	

4. If I asked _____ to answer questions about their daily lives or family, I knew that they were being honest with me.

Low					High
1	2	3	4	5	

5. When _____ and I interacted, I felt comfortable disclosing personal things about myself.

Low					High
1	2	3	4	5	

6. When I discussed my personal daily life with _____ I knew that I could be open and honest with them.

Low					High
1	2	3	4	5	

7. I trust _____ not to overstep bounds with me or my personal information.

Low				High
1	2	3	4	5

Please answer the following questions as thoroughly as possible. Use the back of the page if you need more room.

8. Please provide your opinion of how culture impacted your interaction with your partner.
9. How did interacting over just the Internet with your partner affect your relationship or trust building?
10. How do you think interacting via the Internet differed from any face-to-face partnerships you have been in??
11. How much do you feel you were able to trust your partner? Did that change throughout the semester?